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COMPANY

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

UNITED STATES OF AMERICA,

Plaintiff,

v.

PACIFIC GAS AND ELECTRIC COMPANY,

Defendant.

Case No. 14-CR-00175-WHA

**RESPONSE TO FOLLOW-UP
QUESTIONS RE DIXIE AND FLY
FIRES**

Judge: Hon. William Alsup

Defendant Pacific Gas and Electric Company (“PG&E”) respectfully submits this response to Questions 1 through 6 contained in the Court’s August 17, 2021 order. Dkt. 1417.

Question 1:

The photo of the stump submitted on July 28 does not comport with the other photos from the scene submitted on that date. The stump is shown as burned to a crisp and about three-quarters gone, yet the limbs and needles very close by are green and unburned. Seems impossible. Moreover, the other photos show the fallen Douglas Fir as unburned and green (save for the line burns). How could the stump have burned so thoroughly yet the rest of the tree remain so unburned? This incongruity does not match up. Please explain. Provide the true picture of the true stump, as well as all other photos, including a photo of the bottom of the trunk of the Douglas Fir.

PG&E Response:

Burning on the tree was concentrated at the base and burning in the immediately surrounding area was uneven, as noted below and as reflected in the full set of photos from July 18, 2021. The stump and tree trunk shown in the photos submitted to the Court have been removed from the site by CAL FIRE or law enforcement, presumably as evidence.¹ It does not appear that CAL FIRE removed any other stump or tree from the site. Contractor Decl. ¶ 5. CAL FIRE has not yet expressed any view concerning the significance, if any, of the burn patterns on the tree or on nearby trees and shrubbery. Investigation concerning the precise cause, origin, and course of the fire is ongoing. PG&E requested access to the evidence CAL FIRE collected from the site. CAL FIRE denied that request.

PG&E’s photos of the stump, previously submitted to the Court on August 4, 2021 (Dkt. 1414), were taken on July 18, 2021, when CAL FIRE and other law enforcement collected evidence at the site. Contractor Decl. ¶ 3. CAL FIRE permitted two PG&E contractors and one electrical worker employee to attend. *Id.* ¶ 2.

¹ The removal of the stump can be seen by comparing the photo in Exhibit R-1, which was taken on July 18 (and which PG&E submitted to the Court on August 4, 2021 labeled 2021-07-18_0567) with the photo in Exhibit R-4, which was taken on July 26 (and which PG&E submitted to the Court on August 4, 2021, labeled 2021-07-26_1646).

These PG&E representatives were able to take photos of the tree (when it was still leaning on the line) from the road uphill from the location. Contractor Decl. ¶ 3. CAL FIRE then cut the tree, causing it to fall to the ground, before PG&E's representatives could get down the hill; they were therefore unable to observe or take photos of the base of the tree or the stump *while the tree was still leaning on the line*. *Id.* They took photos of the stump, then still in place, and the rest of the tree, by then lying on the ground. *Id.* CAL FIRE removed sections of the tree that day. *Id.* ¶ 4. Although PG&E did not observe the removal of the stump, it appears that CAL FIRE (or other law enforcement) removed the stump after July 18 and before CAL FIRE released the site on July 23. *Id.* ¶ 5; *see also* PSS Decl. ¶ 8.²

PG&E previously provided the Court with copies of all of the photos its representatives took at the July 18 collection of evidence. Dkt. 1414. For the convenience of the Court, PG&E highlights and attaches several of those previously produced photographs here:

- Attached as Exhibits R-1 through R-3 are true and correct photos showing the tree stump that CAL FIRE later removed and is associated with the tree that had been leaning against the line.³ Contractor Decl. ¶ 6. Included in these photos are wider shots showing the subject stump surrounded by other vegetation, where burning appears uneven.
- Attached as Exhibit S-1 through S-3 are true and correct photos showing that the bottom of the subject tree was charred, but that charring extended only a short way up the trunk.⁴ Contractor Decl. ¶ 6. This is consistent with the troubleman's observation on July 13 that the fire was on the ground near the base of the tree. Troubleman Decl. ¶ 3.
- Attached as Exhibits T-1 and T-2 are true and correct photos showing the top of the tree from which the trunk sections in the pictures referenced above were cut. Contractor

² *See* note 1, *supra*.

³ PG&E provided these photos to the Court on August 4, 2021, labeled 2021-07-18_0567.JPG, 2021-07-18_1272.JPG and 2021-07-18_1285.JPG. PG&E also provides a photo taken on July 26, 2021, which shows the roots of the tree after the stump was removed. *See* Exhibit R-4. PG&E provided this photo to the Court on August 4, 2021, labeled 2021-07-26_1646.JPG.

⁴ PG&E provided these photos to the Court on August 4, 2021, labeled 2021-07-18_0778.JPG, 2021-07-18_0785.JPG, and 2021-07-18_1456.JPG. The orange spray paint visible in these photos was applied by law enforcement. Contractor Decl. ¶ 4.

Decl. ¶ 6. These pictures show that the top of the tree was green and largely unburned.⁵ *Id.*

- Attached as Exhibits U-1 and U-2 are true and correct photos showing localized charring on the upper portion of tree.⁶ Contractor Decl. ¶ 6.

Question 2:

While the photos were being taken, what was the status of the Dixie Fire and who was trying to contain it? Who took the photos?

PG&E Response:

On August 4, 2021, PG&E submitted to the Court photos taken at the reported area of origin of the Dixie Fire on July 18, 2021 and July 26, 2021. *See* Dkt 1414. On July 18, when CAL FIRE cut down the tree, CAL FIRE's status report for the Dixie Fire reported that as of 7:00 p.m., the fire had burned 18,702 acre and was 15% contained; CAL FIRE was working to contain it.⁷ At the time of the evidence collection on July 18, the active fire appeared to be a few miles away from the site where the photos were taken. Contractor Decl. ¶ 2.

CAL FIRE informed PG&E that it had released the site on July 23, 2021 at 5:00 p.m. PSS Decl. ¶ 8, and PG&E performed a site inspection on July 26. At that time, CAL FIRE's status report for the Dixie Fire reported that, as of 7:00 p.m., the fire had burned 198,021 acres and was 22% contained; CAL FIRE was then, and continues at this writing, working actively to contain the fire.⁸ At the time of the July 26 site inspection, no active fire was visible at from the site. Contractor Decl. ¶ 5.

The identity of those who took the photos that PG&E provided to the Court on

⁵ PG&E provided these photos to the Court on August 4, 2021, labeled 2021-07-18_0464.JPG and 2021-07-18_0486.JPG.

⁶ PG&E provided these photos to the Court on August 4, 2021, labeled 2021-07-18_0478.JPG and 2021-07-18_1229.JPG.

⁷ Information about the status of the Dixie Fire is published by CAL FIRE in periodic incident reports. *See* Exhibit V-1 (CAL FIRE Dixie Incident Report dated July 18, 2021 at 7:00 p.m.).

⁸ *See* Exhibit V-2 (CAL FIRE Dixie Incident Report dated July 26, 2021 at 7:00 p.m.).

August 4, 2021 is attached hereto in Exhibit W, which PG&E files under seal to protect their identities.

Question 3:

Please provide a sketch map with the following shown, approximately to scale, with respect to the Dixie Fire:

- (a) The Bucks Creek 1101 Line;
- (b) The fuse hanging down;
- (c) The place at the Cresta Dam for which the troubleman saw the fuse hanging down (using binoculars);
- (d) The Bucks Creek substation;
- (e) Rock Creek Switching Center;
- (f) The route that the troubleman took to reach the pole with the hanging fuse;
- (g) The Douglas Fir on the line;
- (h) The 600 or 800 square-foot fire first seen by the Troubleman;
- (i) Where the drone was seen; and
- (j) All other roads that would have allowed access to the location where the fuse was hanging down.

PG&E Response:

Attached hereto as Exhibits X-1 through X-3 are three maps showing the requested information except for item (i) "Where the drone was seen." According to a press report, a CAL FIRE plane reported seeing a drone in the evening of July 13.⁹ CAL FIRE reported that the drone was near enough to interfere with its aerial operations over the Dixie Fire.¹⁰ PG&E has no more specific information as to where a drone was sighted.

⁹ See, e.g., Dan Brekke, "Investigators Probing PG&E's Possible Link to Fateful Dixie Fire Drone Flight," KQED, August 10, 2021, *available at* <https://www.kqed.org/news/11884337/investigators-probing-pges-possible-link-to-fateful-dixie-fire-drone-flight> ("Then at about 7:45 p.m., with about 45 minutes of daylight remaining to continue flying, a Cal Fire air attack pilot spotted a drone over the fire.").

¹⁰ See, e.g. Mason Carroll, "Drone forces CAL FIRE aircraft to land in the middle of fighting the Dixie Fire on Tuesday," KRCR, July 14, 2021, *available at* <https://krctrv.com/news/local/drone-forces-cal-fire-aircrafts-to-land-in-the-middle-of-fighting-the-dixie-fire> ("CAL FIRE Air Attack Captain James Beeson said they were making considerable ground right before they had to land. . . . 'As they were starting to make some good work towards the evening, a drone did intrude in the airspace,' Beeson said. 'So they had to stop the airshow.'").

1 The Troubleman identified the locations of items (b), (c), (f), (g), and (h) reflected in
 2 the attached maps. *See* Troubleman Decl. ¶¶ 3-4. The locations for items (a), (d), (e), and (j) were
 3 retrieved from PG&E’s Geographical Information System and third party data vendors. *See* GIS
 4 Analyst Decl. ¶ 3.

5 **Question 4:**

6 The Court has received information that PG&E informed the Monitor of the following:
 7 PG&E believed that the drone that interfered with Dixie firefighting on July 13 was being
 8 flown by a PG&E contractor at the time of the interference. PG&E believed that the
 9 contractor was not doing work for PG&E at the time of the interference, however,
 10 because records indicated that it had completed PG&E surveillance work for the day. Is it
 true that PG&E did believe that a PG&E contractor operated the drone (regardless of
 whether it was on behalf of PG&E or not)? What was the source of this information?
 Does PG&E still believe that?.

11 **PG&E Response:**

12 PG&E has not identified information showing that one of its contractors operated a
 13 drone near the Dixie Fire on July 13. PG&E records indicate that no such operation was undertaken
 14 at PG&E’s direction or on its behalf. PG&E, however, cannot speak definitively as to what
 15 contractors may have done on their own, since PG&E records do not reflect one way or another what
 16 contractors did or did not do once they completed their work for PG&E.

17 On July 14, the day after CAL FIRE reported that a drone had interfered with
 18 operations, PG&E received a law enforcement request for information concerning the identity of a
 19 drone that reportedly interfered with CAL FIRE operations on the evening of July 13, 2021. PG&E
 20 began an investigation and provided to law enforcement information the Company learned on an
 21 ongoing basis.

22 On July 14, 2021, an individual employed by PG&E observed a jeep with the words
 23 “drone team” on its side at a parking lot along Highway 70 where people often stop for cell service,
 24 approximately 14 miles south of the Cresta Dam. PSS Decl. ¶ 4. The PG&E employee (formerly
 25 with CAL FIRE), who had heard that there had been a drone interfering with CAL FIRE operations
 26 the evening before, took pictures of the jeep and the license plate and turned that information over to
 27
 28

1 the Butte County Sheriff's Department. *Id.* ¶ 5. The PG&E employee did not know whether the
2 vehicle belonged to a PG&E drone contractor. *Id.* ¶ 6.

3 Photos taken by this individual showed the company name on the side of the jeep.
4 PSS Decl. ¶ 7. PG&E records reflect that this company was one of two drone contractors who had
5 been on a dispatch schedule and received clearance for flights to inspect certain transmission lines
6 for PG&E in Butte and Plumas counties in the morning of July 13, 2021. Drone Records Custodian
7 #1 Decl. ¶ 3, Attachment 1. Neither contractor was scheduled to operate drones over or near the
8 Bucks Creek 1101 Distribution Circuit. *Id.*

9 These PG&E dispatch records do not indicate that either drone contractor asked for or
10 received clearance for a flight over the Bucks Creek 1101 Circuit or the Dixie Fire. The dispatch
11 records do not indicate that either drone contractor asked for or received clearance to initiate any
12 previously unscheduled flights on the afternoon or evening of July 13, 2021. Drone Records
13 Custodian #1 Decl. ¶ 3, Attachment 1. PG&E's policy prohibits drone flights at night and requires a
14 minimum of three miles of visibility. *Id.* ¶ 4 Attachment 2 (PG&E Unmanned Aerial Systems
15 ("UAS") Operations Manual) at 22, 23. PG&E's dispatch records do not indicate one way or
16 another whether the employees of either contractor operated a drone after they completed their work
17 for PG&E, whether over the Dixie Fire or anywhere else.

18 On July 22, 2021, during a regularly scheduled, weekly check-in call between several
19 PG&E employees and members of the Federal Monitor's team, two PG&E employees summarized
20 the foregoing information as part of an ongoing effort to keep the Monitor informed concerning law
21 enforcement inquiries. Employee Decl. ¶ 3.

22 Following the July 22, 2021 call, PG&E's investigation continued. Records received
23 from the drone contractors after their flights indicated that the contractors had completed their work
24 for PG&E on July 13 in Butte and Plumas counties by approximately 12:30 p.m. These records
25 indicate that on July 13, 2021, the two drone contractors referenced above each flew one of their
26 three scheduled flights in Butte and Plumas counties. The flight conducted by the first drone
27 contractor (whose jeep was observed by the PSS on July 14) was to inspect a single structure on the
28

1 Caribou-Westwood transmission line approximately 20 miles from the alleged origin site of the
 2 Dixie Fire.¹¹ Drone Records Custodian #2 Decl. ¶ 3, Attachment 1. Based on time-stamped photos
 3 from that flight and on flight records, that flight was completed by approximately 12:30 p.m. *Id.* ¶
 4 3.

5 PG&E records indicate that the flight conducted by the second drone contractor was
 6 to inspect a single structure on the Caribou-Westwood transmission line approximately 30 miles
 7 from the alleged origin site of the Dixie Fire *Id.* ¶ 4, Attachment 2. Based on time-stamped photos
 8 from that flight and on flight records, that flight was completed by approximately 11:00 a.m. *Id.* ¶ 4.

9 PG&E records do not indicate what the employees of either contractor did later that
 10 day after they completed the above referenced inspections and were no longer working for PG&E.
 11 Drone Records Custodian #2 Decl. ¶¶ 3, 4.

12 PG&E provided the foregoing information concerning flight times to law
 13 enforcement. On August 12, KCBS reported the following regarding the District Attorney's
 14 investigation into the drone: "Despite some speculation that the drone might have been one
 15 of PG&E's, according to Ramsey all evidence points to the contrary. As of right now, he believes
 16 the drone most likely belongs to an individual. 'A number of tangents are still being explored,' he
 17 said."¹²

18 PG&E reported to this Court on August 16, "PG&E has not identified any individual
 19 or company who flew a drone near the Dixie Fire on the evening of July 13, 2021. PG&E has seen
 20 no indication that any PG&E employee or contractor was instructed or asked to—or did—fly a drone
 21
 22

23 ¹¹ PG&E's August 16, 2021 submission correctly identified that this contractor's flight was of a
 24 single structure on the Caribou-Westwood line, and that the structure was approximately 20 miles
 25 from the alleged origin site of the Dixie Fire, but inadvertently referred to the location as in Butte
 County; this structure is in neighboring Plumas County.

26 ¹² Natalia Gurevich, "Authorities investigate drone interfered with initial critical efforts to control
 Dixie Fire," KCBS, August 12, 2021, *available at*
 27 [https://www.audacy.com/kcbsradio/news/weather/drone-interfered-with-critical-efforts-to-control-](https://www.audacy.com/kcbsradio/news/weather/drone-interfered-with-critical-efforts-to-control-dixie-fire)
 28 [dixie-fire.](https://www.audacy.com/kcbsradio/news/weather/drone-interfered-with-critical-efforts-to-control-dixie-fire)

1 along the Bucks Creek 1101 Circuit or near the Dixie Fire on July 13, 2021.” Dkt. 1416 at 7. PG&E
 2 stands by that report.

3 **Question 5:**

4 The circuit was ranked 11 out of 3,635 circuits with respect to the Equipment Risk.
 5 Please state each reason the circuit received such an elevated risk rating.

6 **PG&E Response:**

7 PG&E uses the 2021 Wildfire Distribution Risk Model (the “Model”)¹³ to assess
 8 wildfire risk associated with its distribution overhead circuits in the High Fire Threat Districts
 9 (“HFTDs”) Tier 3 (“Extreme”) and Tier 2 (“Elevated”). Risk Mgmt. Decl. ¶ 3. The Model seeks to
 10 quantify the potential risk of wildfire represented by the probability of ignition associated with
 11 electric distribution overhead facilities combined with the consequences should that ignition
 12 propagate into a wildfire. *Id.* PG&E has approximately 25,500 miles of distribution overhead
 13 circuit miles in HFTD Tiers 2 and 3. *Id.* ¶ 4. For purposes of the Model, PG&E segments its
 14 distribution circuits into Circuit Protection Zones (“CPZs”) so that wildfire mitigation work can be
 15 more effectively targeted. *Id.* As explained in the 2021 Wildfire Mitigation Plan, CPZs are the
 16 smallest non-overlapping sections of the distribution grid that can be de-energized.¹⁴ *Id.* The 2021
 17 WMP also explained that CPZs for system hardening (e.g., covered conductor or undergrounding)
 18 are different than the CPZs used for enhanced vegetation management (“EVM”).¹⁵ *Id.* The CPZs
 19 are separately ranked by a risk score based on the Probability of Ignition from equipment failure
 20 (“Equipment Risk Model”) and the Probability of Ignition from contact from vegetation
 21 (“Vegetation Risk Model”), combined with the Consequence of Ignition. *Id.* There are 3,635 CPZs
 22
 23

24 ¹³ The 2021 Wildfire Distribution Risk Model is discussed in PG&E’s 2021 Revised Wildfire
 25 Mitigation Plan (“WMP”) at pages 130-135.

26 ¹⁴ WMP, p. 736.

27 ¹⁵ WMP, p. 173 n.53.

1 included in the Equipment Risk Model in HFTD Tiers 3 and 2; their average length is approximately
2 7 miles. *Id.*

3 With respect to the Equipment Risk Model, the elevated risk ranking of the CPZ that
4 encompasses the span where the tree fell, Bucks Creek 1101CB, was based on the presence of an
5 older and smaller gauge conductor, the presence of splices from prior conductor repairs, and
6 estimates of acres burned and fire intensity generated from Technosylva fire modeling simulations.
7 Risk Mgmt. Decl. ¶ 5. The Technosylva simulation tool models wildfire propagation by considering
8 historical weather conditions and ground fuels, and wildfire consequence considering the proximity
9 to buildings and populations during an 8-hour fire simulation. PG&E discusses the Technosylva
10 Fire Consequence in its 2021 Revised WMP at pages 160-161. *Id.* Under an earlier model used to
11 inform workplans in 2019 and 2020, which used a different methodology and different vintage of
12 CPZs, out of 3,205 CPZs, the CPZ that encompasses the span where the tree fell ranked #1,605. *Id.*
13 ¶ 6.

14 **Question 6:**

15 The circuit was ranked 568 out of 3,074 circuits with respect to Vegetation Risk.
16 Please state each reason the circuit received such an elevated risk rating.

17 **PG&E Response:**

18 Similar to the 2021 Wildfire Distribution Risk Model for Equipment, the 2021
19 Wildfire Distribution Risk Model for Vegetation develops a Probability of Ignition from vegetation
20 contact using a machine learning algorithm to estimate where ignitions could occur in the HFTDs
21 based on data attributes related to trees, environmental (ground fuels), and weather. Risk Mgmt.
22 Decl. ¶ 7. The model is discussed in further detail in the WMP.

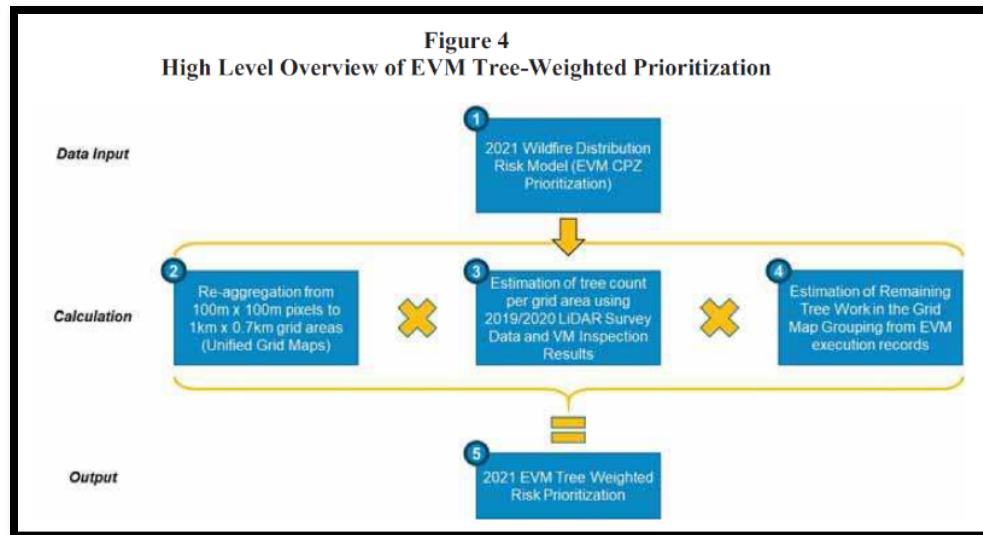
23 The output of the Vegetation Risk Model is the basis of the Enhanced Vegetation
24 Tree Weighted Prioritization Ranking, which is used to develop the Enhanced Vegetation
25 Management Scope of Work. Risk Mgmt. Decl. ¶ 8. The ranking starts with the output from the
26 Vegetation Risk Model, which combines the Probability of Ignition from contact from vegetation
27 with the Consequences of Ignition based on Technosylva fire modeling simulations. *Id.* PG&E then
28

refines the risk score by incorporating additional information from LiDAR surveys, vegetation inspections, and recent vegetation management work performed in 2019 and 2020. *Id.* This methodology resulted in the EVM Tree-Weighted Prioritization List as follows:

1. The Team re-aggregated the CPZ risk score from 100 meter x 100 meter pixels (used in the Vegetation Risk Model) to 1 km x 0.7 km grid areas (known as Unified Grid Maps, or PlatMaps) occupied by the CPZ. This was necessary to support the methodology employed by PG&E in operationalizing its inspections.
2. The Team estimated the number of trees per grid area using LiDAR survey data and vegetation management inspection results. PG&E performed LiDAR survey in mid-2019 and early-2020 on overhead distribution circuits in the HFTD areas. Vegetation inspectors subsequently visited approximately 5,000 miles of circuit segments in an effort to validate the LiDAR data. The data collected by the inspectors was used as part of a regression analysis to predict the amount of tree work in each grid area and associated CPZ.
3. The third modification weighted each grid area and associated CPZ by tree work. The results were combined with the number of trees for which work has already been completed in each grid area to estimate the number of trees that will need work in each grid area and CPZ. The number of trees that will need work was used to weight the CPZ risk.

Id.

PG&E discusses the interaction of the 2021 Wildfire Distribution Risk Model and the EVM Tree Weighted Prioritization List in its Enhanced Oversight and Enforcement Process Corrective Action Plan (“CAP”) at pages 7-15. Figure 4 below is reproduced from the CAP and provides a high level overview of the process for developing the EVM Tree-Weighted Prioritization List.



Bucks Creek 1101CB was ranked #568 out of 3,074 CPZs in the Enhanced Vegetation Management Tree Weighted Prioritization List, based in part on estimates of acres burned and fire intensity generated from Technosylva fire modeling simulations, as well as the forecast of the number of trees that will need to be treated in the relevant grid area. Risk Mgmt. Decl. ¶ 9. PG&E did not use the Enhanced Vegetation Management Tree Weighted Prioritization List in 2020. *Id.* Under an earlier model used to inform workplans in 2019 and 2020, which used a different methodology and ranked entire circuits rather than CPZs, the Bucks Creek 1101 Circuit was ranked #287 out of 696. *Id.*

1 Dated: August 25, 2021

Respectfully Submitted,

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